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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,148	08/31/2001	Heuricus J.M. Van De Ven	110366	8649
25944	7590	10-15/2003	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			TORRES VELAZQUEZ, NORCA LIZ	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 10/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/943,148	VAN DE VEN ET AL.	
	Examiner	Art Unit	
	Norca L. Torres-Velazquez	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P **riod for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 1-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments filed on July 28, 2003 have been fully considered but they are not persuasive.

a. The rejection of claims 21-36 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicant's amendment.

b. With regards to the rejection of claims 20-21, 23 25-26, 31-33 under 35 U.S.C. 103(a) as being unpatentable over LIM et al. in view of MAEKAWA et al., Applicants argue that LIM et al. requires a substantially nonporous substrate and that the MAEKAWA et al. reference teaches a heat insulation material with a porous fibrous substrate that supports a metal coating. Further, Applicants argue that the metal coating taught by MAEKAWA et al. is a non-continuous metal layer as a result of the fibrous sheet that supports it. Applicants conclusion is that LIM et al. requires the presence of a substantially non-porous substrate, whereas the teachings of MAEKAWA et al. are directed exclusively to forming a non-continuous metal layer upon a porous fibrous substrate.

It is noted that the Examiner has relied on the MAEKAWA et al. reference to provide for a metal coating (reflective layer), to the non-porous support taught by LIM in order to provide this support with heat insulation characteristics.

In response to applicant's argument that the MAEKAWA et al. reference suggests a non-continuous metal layer versus a continuous metal layer, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the

structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

c. With regards to the rejection of claims 20-21, 23 25-26, 31-33 over HORN in view of MAEKAWA et al., Applicants argue that the HORN reference fails to teach a hydrophilic flat substrate, and that it clearly teaches the requirement of a combination of a hydrophobic and hydrophilic film to form a bicomponent film substrate.

It is noted that the HORN reference teaches a muticomponent film structure that includes a hydrophilic layer and that the structure taught by the reference teaches a "breathable waterproof" fabric with the same properties aimed in the present invention. Since the substrate as claimed in the present invention does not preclude the inclusion of other materials, it is the Examiner's position that the HORN reference reads on the claimed substrate.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 20-21, 23-26, 31-33 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIM et al. (US 6,187,696) in view of MAEKAWA et al. (US 4,637,947) as stated in previous action.

LIM et al. discloses a moisture vapor permeable, substantially liquid impermeable composite sheet material comprising a fibrous substrate and a moisture vapor permeable thermoplastic film layer. (Abstract) The reference teaches that the moisture vapor permeable, substantially liquid impermeable film is a polyether block copolymer such a copolymers comprised of block copolyether esters. (Column 5, lines 7-10) The reference further teaches that the basis weight of the fibrous substrate is between about 13.5 to about 40 g/m². (Refer to Claim 2)

However, the reference does not disclose a metal layer adhered to the substrate surface.

MAEKAWA et al. discloses a heat insulation material used in winter clothes. A fibrous sheet material such as nonwoven fabrics, knitted fabrics and textile is used to support or carry a metal and the fibrous sheet material having a metal deposited surface is fixed to a heat insulating fibrous layer. (Abstract) The supporting material of the heat insulation material of their invention is composed of fibrous sheet materials such as non-woven fabrics, woven fabrics and knitted textiles, wherein it can be classified into two cases, one case in which they are made to a fabric form together and a reflecting layer of metal or non-metal material is deposited in vacuum condition or transferred onto the surface of the supporting material. (Column 2, lines 10-17) In order to make a cover under vacuum deposition process, which is one of means for forming a reflecting layer, it is possible to apply metal or non-metal such as aluminum, gold, silver, nickel and chromium. (Column 2, lines 23-26) The reference further teaches that the reference numeral

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1 designates a supporting material which is composed of fibrous sheet material such as non-woven fabrics, woven fabrics and knitted fabrics and the like. (Column 3, lines 34-38) Figure 2, shows a supporting material 1 having a reflecting layer 2 and a heat insulating fibrous layer 3. (Column 4, lines 5-11) With regards to claim 24, it is noted that woven or knitted fabrics would provide for the claimed textile fabric whose filaments are spaced apart.

With regards to claim 29, MAEKAWA et al. teaches that a porous cover may be arranged on the metal deposited surface of the fibrous sheet material in order to avoid the occurrence of a slimy feeling under adhesion of moisture generated from the body by direct contact of the skin of the user to the metal deposited surface. (Column 1, lines 45-58)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the laminate and provide it with a metal layer with the motivation of improving the heat insulation characteristics of the laminate as disclosed by MAEKAWA et al. (Column 1, lines 11-15)

4. Claims 20-21, 23-26, 31-33 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over HORN (US 5,447,783) in view of MAEKAWA et al. (US 4,637,947).

HORN teaches that vapor-permeable, waterproof bicomponent film structures made from a hydrophobic copolyetherester elastomer film layer and a hydrophilic copolyetherester elastomer film layer are known in the art. Such film structures are often bonded to a textile material to result in a so-called "breathable, waterproof" fabric. The reference teaches a multilayer film structure having outer layers of a hydrophobic copolyetherester elastomer and at least one inner layer of a hydrophilic copolyetherester elastomer. (Column 1, lines 7-36)

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HORN teachings provide the claimed nonporous, water-vapor-permeable, watertight, hydrophilic flat substrate.

However, the reference does not disclose a metal layer adhered to the substrate surface.

MAEKAWA et al. discloses a heat insulation material used in winter clothes. A fibrous sheet material such as nonwoven fabrics, knitted fabrics and textile is used to support or carry a metal and the fibrous sheet material having a metal deposited surface is fixed to a heat insulating fibrous layer. (Abstract) The supporting material of the heat insulation material of their invention is composed of fibrous sheet materials such as non-woven fabrics, woven fabrics and knitted textiles, wherein it can be classified into two cases, one case in which they are made to a fabric form together and a reflecting layer of metal or non-metal material is deposited in vacuum condition or transferred onto the surface of the supporting material. (Column 2, lines 10-17) In order to make a cover under vacuum deposition process, which is one of means for forming a reflecting layer, it is possible to apply metal or non-metal such as aluminum, gold, silver, nickel and chromium. (Column 2, lines 23-26) The reference further teaches that the reference numeral 1 designates a supporting material which is composed of fibrous sheet material such as non-woven fabrics, woven fabrics and knitted fabrics and the like. (Column 3, lines 34-38) Figure 2, shows a supporting material 1 having a reflecting layer 2 and a heat insulating fibrous layer 3. (Column 4, lines 5-11) With regards to claim 24, it is noted that woven or knitted fabrics would provide for the claimed textile fabric whose filaments are spaced apart.

With regards to claim 29, MAEKAWA et al. teaches that a porous cover may be arranged on the metal deposited surface of the fibrous sheet material in order to avoid the occurrence of a

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slimy feeling under adhesion of moisture generated from the body by direct contact of the skin of the user to the metal deposited surface. (Column 1, lines 45-58)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the laminate and provide it with a metal layer with the motivation of improving the heat insulation characteristics of the laminate as disclosed by MAEKAWA et al. (Column 1, lines 11-15)

5. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over HORN and MAEKAWA et al. as applied to claim 21 above, and further in view of SEGAWA et al. (US 4,068,034).

The prior art of HORN and MAEKAWA et al. fails to disclose the thickness of the metal layer.

SEGAWA et al. teaches a heat-insulation material. The reference teaches that the product is obtained by adhering a layer of a metal to one surface of a polyvinylidene fluoride film and adhering a priming material to the opposite surface of the metal layer. The adhesion of the metal layer to one surface of the film can be accomplished by ordinary means such as vacuum deposition or plating. The metal layer ordinarily has a thickness roughly in the range of from 0.01 to 0.5 microns (10 to 50 nm). The term "priming material" means a heat-insulation material or reinforcing material such as paper, fabric, glass cloth, wood sheet, plastic, foam plastic, or metal. (Column 2, lines 44-62)

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the laminate and provide it with a metal layer thickness of 0.01 to 0.5 microns with the motivation of producing a material with outstanding insulating

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characteristics that will avoid the problem of oxidation of the metal layer of the prior art as disclosed by SEGAWA et al. (Column 1, lines 15-27 and line 55).

6. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over HORN (US 5,447,783) in view of MAEKAWA et al. (US 4,637,947) as stated on paragraph 7 and further in view of LIM et al.

The MAEKAWA et al. reference teaches the use of knitted fabrics in the composite, while LIM et al. teaches that the basis weight of the fibrous substrate is between about 13.5 to about 40 g/m². (Refer to Claim 2)

While the prior art of record does not teach the thickness of the textile fabric, it is recognized as result effective variable in this field of endeavor and it has been held that discovering optimum values would have been or result effective variables involves only routine experimentation. I.e. the thickness of the textile used in the composite will depend on the final product or use of the composite.

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

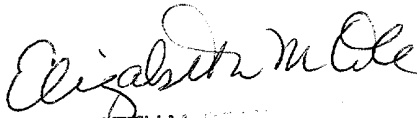
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 703-306-5714. The examiner can normally be reached on Monday-Thursday 8:00-4:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

NLT

October 7, 2003


ELIZABETH M. COLE
PRIMARY EXAMINER